

REMARKS

Applicants have carefully considered the September 21, 2004 Office Action, and the amendments above together with the comments that follow are presented in a bona fide effort to address all issues raised in that Action and thereby place this case in condition for allowance. Claims 1-3, 6 and 8-18 are pending in this application. Claims 8 through 17 stand withdrawn from consideration pursuant to the provisions of 37 C.F.R. §1.142(b).

In response to the Office Action dated September 21, 2004, claims 1 and 18 have been amended. Care has been exercised to avoid the introduction of new matter. Adequate descriptive support for the present Amendment should be apparent throughout the originally filed disclosure as, for example, the depicted embodiments and related discussion thereof in the written description of the specification. Applicants submit that the present Amendment does not generate any new matter issue. Entry of the present Amendment is respectfully solicited. It is believed that this response places this case in condition for allowance. Hence, prompt favorable reconsideration of this case is solicited.

Claims 1, 2, 3, 6 and 18 stand rejected under 35 U.S.C. §102(b) for lack of novelty as evidenced by Lee et al. (U.S. Pat. No. 5,223,447, hereinafter “Lee”). In response to Applicants’ arguments submitted on June 24, 2004, the Examiner again referred to Fig. 3 asserting the disclosure of a semiconductor device comprising an isolation merged trench being substantially embedded with a field oxide film (insulator) 24. Applicants respectfully traverse.

Independent claims 1 and 18, as amended, describe in pertinent part, a semiconductor device comprising a semiconductor substrate having a main surface; and an element isolation trench formed on the main surface of the semiconductor substrate. The element isolation trench is substantially filled with an insulator.

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the identical disclosure in a single reference of each element of a claimed invention, such that the identically claimed invention is placed into the possession of one having ordinary skill in the art. *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994). Moreover, in imposing the rejection under 35 U.S.C. § 102, the Examiner is required to specifically identify wherein an applied reference is perceived to identically disclose each feature of a claimed invention. *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993); *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984). That burden has not been discharged. Moreover, there are significant differences between the claimed invention and the device disclosed by Lee that would preclude the factual determination that Lee identically describes the claimed inventions within the meaning of 35 U.S.C. § 102.

Applicants respectfully submit that the trench isolation disclosed by Lee is not substantially filled with an insulator. During a telephone interview with Examiner Lee on October 8, 2004, the Examiner indicated that the trench in the Lee reference is substantially embedded with an insulator (field oxide film 24) in view of the plain meaning of the term “embedded”. The Examiner interprets the term embedded as “to enclose closely in” or “to surround closely”.

Claims 1 and 18 have been amended to replace the term “substantially embedded” with “substantially filled”. The isolation merged trench disclosed by Lee is not substantially filled with an insulator 24, but rather, Figure 3 illustrates that the trench is primarily filled with n⁺ doped polysilicon regions 25, 41. Lee discloses an isolation merged trench which is made to increase the area efficiency of a storing capacitor by utilizing both surfaces of a storing electrode within the trench as a capacitor. See Lee at col. 2, lines 30-36; and col. 2, line 64 through col. 3, line 9. Thus,

the interior of Lee's trench is embedded with n⁺ doped polysilicon regions 25, 41. See Lee at col. 3, lines 60-68.

Accordingly, Lee fails to identically disclose each feature of independent claims 1 and 18 and, therefore the rejection under 35 U.S.C. §102 for lack of novelty as evidenced by Lee is not legally viable and should be withdrawn.

Moreover, support for the claim term "substantially filled) should be apparent throughout the originally filed disclosure as, for example, the depicted embodiments and related discussion thereof in the written description of the specification. Indeed, one having ordinary skill in the art, with the supporting specification in hand, would be able to reasonably ascertain the scope or protection defined by the claim. *In re Cartwright*, 49 USPQ 2d 1464. Consistent judicial precedent holds that reasonable precision in light of the particular subject matter involved is all that is required by the second paragraph of 35 U.S.C. § 112. *Miles Laboratories, Inc. v. Shandon, Inc.*, 997 F.2d 870, 27 USPQ2d 1123 (Fed. Cir. 1993); *North American Vaccine, Inc. v. American Cyanamid Co.*, 7 F.3d 1571, 28 USPQ2d 1333 (Fed. Cir. 1993); *U.S. v. Telectronics Inc.*, 857 F.2d 778, 8 USPQ2d 1217 (Fed. Cir. 1988); *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 231 USPQ 81 (Fed. Cir. 1986). Applicants stress that a patent specification must be viewed through the eyes of one having ordinary skill in the art. *Miles Laboratories, Inc. v. Shandon, Inc.*, supra.

In applying the above legal tenets to the exigencies of this case, Applicants submit that one having ordinary skill in the art would not have been befuddled by the use of the phrase "substantially filled" particularly as employed in the context of the claimed invention. Specifically, one having ordinary skill in the art would recognize that the word "substantially" merely recognizes that the element isolation is filled with an insulator, but not infinitely filled to the nth degree. In other words, the use of the word "substantially" is consistent with judicial recognition that absolutism in nature is elusive. Thus, the use of the word "substantially" is ubiquitous in patent

claims and specifications and has been judicially approved in recognition of the elusiveness of absolute perfection, i.e., absolute purity to the nth degree. *Andrew Corp. v. Gabriel Electronics, Inc.*, 847 F.2d 819, 6 USPQ2d 2010 (Fed. Cir. 1988).

It should, therefore, be apparent that one having ordinary skill in the art would not have difficulty understanding the scope of the claimed invention, particularly when reasonably interpreted in light of the supporting of the specification. *Andrew Corp. v. Gabriel Electronics, Inc., supra.*

It is believed that all pending claims are now in condition for allowance. Applicants therefore respectfully request an early and favorable reconsideration and allowance of this application. If there are any outstanding issues which might be resolved by an interview or an Examiner's amendment, the Examiner is invited to call Applicants' representative at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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